

CLAIMS

1. A method of producing lipid vesicles, wherein the method comprises:
 - a) culturing a biological preparation comprising T lymphocytes under conditions
 - 5 allowing the release of membrane vesicles from T lymphocytes, and
 - b) collecting or purifying vesicles produced in a),and wherein said lymphocytes or vesicles are functionalized to express a selected molecule.
- 10 2. The method of claim 1, wherein said T lymphocytes are expanded and activated in culture.
3. The method of claim 2, wherein the T cells are cultured in the presence of a TCR-activating agent.
- 15 4. The method of claim 2, wherein said T lymphocytes are cultured in the presence of a cytokine, mitogen or calcium ionophore.
5. The method of any one of claims 1 to 4, wherein said biological preparation
- 20 comprises peripheral blood T cells, a T cell line, a T cell clone, a hybridoma or malignant T cells.
6. The method of claim 1, wherein the biological preparation is enriched for a T cell subset.
- 25 7. The method of claim 1, wherein the biological preparation is enriched for or comprises essentially NKT cells, NK cells, $\gamma\delta$ T cells, CD4+ cells or CD8+ cells.

8. The method of claim 1, wherein the biological preparation is a T cell line.

9. The method of any one of claims 1 to 8, wherein the T cells comprise or have been transfected with a recombinant polynucleotide encoding a biologically active molecule.

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10. The method of any one of claims 1 to 9, wherein functionalization of the vesicles is performed by direct loading of the vesicles with an antigenic molecule.

11. The method of claim 1, wherein functionalization of the vesicles is performed by
10 chimeric loading of the vesicles with a chimeric molecule comprising an active portion fused to a lactadherin or E2 glycoprotein, or to a fragment or variant thereof.

12. The method of any one of claims 1 to 11, wherein the vesicles are collected or purified by filtration, centrifugation, ion-chromatography, or concentration, either
15 alone or in combinations.

13. A method of producing immunogenic vesicles, the method comprising:

- a) culturing a biological preparation comprising T lymphocytes under conditions allowing the release of membrane vesicles from T lymphocytes,
- 20 b) collecting or purifying vesicles produced in a), and
- c) contacting said vesicles with an antigenic molecule under conditions allowing the molecule to bind said vesicles, so as to produce immunogenic vesicles.

14. The method of claim 13, wherein the antigenic molecule is a peptide, protein, lipid
25 or a glycolipid.

15. The method of claim 13, wherein the antigenic molecule comprises a HCV envelope glycoprotein or a CD81-binding fragment thereof.

16. The method of claim 13, wherein the molecule is a chimeric protein comprising a polypeptide fused to lactadherin or to a HCV glycoprotein, or to a variant or fragment thereof.

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17. A method of producing functionalized vesicles, comprising:

- a) culturing a biological preparation comprising T lymphocytes under conditions allowing the release of membrane vesicles from T lymphocytes, the biological preparation comprising T lymphocytes containing a recombinant nucleic acid encoding
10 a selected molecule, and
- b) collecting or purifying vesicles produced in a), said vesicles (or a some of them at least) comprising said selected molecule.

18. A method of producing vesicles, comprising:

- 15 a) culturing a clonal or idiotypic population of T lymphocytes having a determined T cell receptor under conditions allowing the release of membrane vesicles from T lymphocytes, and
- b) collecting or purifying vesicles produced in a), said vesicles expressing at their surface said specific T cell receptor.

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19. A method of producing vesicles, comprising:

- a) culturing a T cell line under conditions allowing the release of membrane vesicles from T lymphocytes, and
- b) collecting or purifying vesicles produced in a).

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20. A method of producing lipid vesicles, the method comprising:

- a) culturing a biological preparation comprising T lymphocytes in the presence of a T cell activating agent, allowing the release of membrane vesicles from T lymphocytes, and
b) collecting or purifying vesicles produced in a).

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21. A method of producing a pharmaceutical composition, the method comprising:

- a) culturing a biological preparation comprising T lymphocytes under conditions allowing the release of membrane vesicles from T lymphocytes,
b) collecting or purifying vesicles produced in a), and
10 c) conditioning said vesicles in a pharmaceutically acceptable carrier or excipient.

22. A pharmaceutical composition comprising a membrane vesicle and a pharmaceutically acceptable vehicle or excipient, wherein said vesicle is obtained from T lymphocytes.

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23. The pharmaceutical composition of claim 22, wherein the vesicle comprises a selected molecule, such as a drug or an antigenic molecule, more preferably a complex between a MHC molecule present within said vesicle and an exogenous antigenic peptide.

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24. A method of stimulating an immune response against an antigen in a subject, comprising administering to the subject an effective amount of a composition of claim 22.

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25. A method of stimulating an immune response against an antigen in a subject, comprising :

- a) culturing a biological preparation comprising T lymphocytes under conditions allowing the release of membrane vesicles from T lymphocytes,

b) collecting or purifying vesicles produced in a), wherein said vesicles are immunogenic,

c) conditioning said vesicles in a pharmaceutically acceptable carrier or excipient, and

d) administering the vesicles to a subject in an amount effective to stimulate an
5 immune response.

26. A method of delivering an antigenic molecule to an antigen-presenting cell, comprising contacting in vitro or ex vivo antigen-presenting cells with a composition or an immunogenic vesicle according to claim 22, said vesicle comprising said
10 antigenic molecule.

27. A method of stimulating dendritic cells, comprising contacting dendritic cells with a composition or an immunogenic vesicle according to claim 22.

15 28. A method of delivering a molecule to a target cell, comprising contacting said target cells with a composition or an immunogenic vesicle according to claim 22, said vesicle comprising said molecule.

29. A method of characterizing a preparation of vesicles derived from T cells, the
20 method comprising :

. isolating such vesicles from a biological preparation comprising T lymphocytes, and
. determining the quantity or the quality of said vesicles by absorbing the same on a support and assessing the presence of specific markers at the surface of these vesicles.

25 30. A composition comprising an immunogenic membrane vesicle, wherein said vesicle is obtained from T lymphocytes and is loaded with an antigenic molecule.

31. A composition comprising a vesicle derived from T lymphocyte and a HCV envelope glycoprotein or a CD81-binding fragment thereof.

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